CHAPTER 37

Sexual Dysfunction

Dan F. Criswell and L. Peter Schweibert

DYSPAREUNIA

Dyspareunia (literally, "painful mating") is a symptom complex characterized by persistent and/or recurrent genital pain experienced just before, during, or after sexual intercourse producing distress and/or interpersonal difficulty. The pain associated with dyspareunia involves the introitus, vulvar surfaces, vagina, and the deeper pelvic structures. Leading causes of dyspareunia are vulvar vulvodynia, infection, and endometriosis in women younger than age 50 and vulvovaginal atrophy in women older than age 50.

Symptoms

- Pain +++
- Aching: pelvic congestion
- Burning/itching

Signs

- Normal appearing introitus
- Localized discrete vulvovaginal lesions
- Erythema and hypersensitivity to touch
- Involuntary spasm on speculum examination
- Pale, dry vulvovaginal mucosa
- Vaginal stenosis
- Discharge
- Cervicitis, healed obstetric tears
- Localized tenderness or dysesthesia
- Pelvic masses
- Cystic or urethral tenderness

Workup

- Wet prep, KOH prep, gonococcal, and chlamydia probes
- Pap smear
- Complete UA
- Pelvic ultrasound
- Bladder-filling test
- Cystoscopy
- Laparoscopy
- Skin/vaginal/cervical biopsy

Comments and Treatment Considerations

Primary dyspareunia is a diagnosis of exclusion. If the onset is acute and identifiable to a specific point in time in sexually active females, infectious causes predominate. Other etiologies include endometriosis and ovarian or uterine pathology. Nongenital causes include problems in the bladder or GI tract.

In primary dyspareunia the primary goal of therapy is to diminish symptoms sufficiently to allow for successful intercourse and restoration of mutually satisfying sexual experiences. Identification of patient avoidance behaviors and development of therapeutic strategies will help her regain a degree of control over the condition. Adequate sexual arousal phase should be ensured and supplemental lubrication recommended if needed. For vulvodynia and other nondermatologic conditions associated with dysesthesia, use of nonsensitizing topical anesthetics (lidocaine 5% as needed or cromolyn cream 4% applied three times daily) may provide symptomatic relief. If pain is characterized as burning, shooting, or stabbing, gabapentin (initially 300 mg daily increasing weekly to maximum of 900 mg three times daily) and/or TCAs (nortriptyline or desipramine 25 to 75 mg at bedtime) may be helpful.

Referral is indicated when these therapeutic approaches are not beneficial or the diagnosis is in doubt. If behavioral issues predominate, if the dyspareunia is associated with posttraumatic stress disorder, or if dyspareunia is associated with personality disorders, psychiatric referral is helpful. If other organ systems are involved with dyspareunia, appropriate specialty referral may be warranted. Referral for biofeedback and physical therapy should be considered to help patients regain control of the pelvic floor musculature. Perineoplasty, flashlamp excited dye laser (FEDL), vestibulectomy, or other surgical procedures should be reserved for patients with severe and recalcitrant disease.

ERECTILE DYSFUNCTION

Erectile dysfunction (ED) is the consistent or recurrent inability to maintain penile erections sufficient to permit satisfactory sexual intercourse, for at least 3 months. Normal male sexual function consists of the following three components: desire/libido, penile erection and orgasm, which in turn depend on a complex interaction of psychiatric, hormonal, neurologic and vascular factors.

Sudden onset ED tends to be due to psychogenic, traumatic, or medication causes. Gradual onset ED tends to be vasculogenic, neurogenic, or due to or hypogonadism. Sleep-associated erections (SAEs) coupled with successful erection with a different partner or with erotic stimulus suggests psychogenic causes; absence suggests organic causes.

Symptoms

- Inability to attain or maintain erections ++++

Signs

- Lack of secondary sexual characteristics (hypogonadism)
- Postural hypotension (autonomic dysfunction)
- Absent pedal pulses (vascular)
- Testicular atrophy (hypogonadism)
- Penile corpora cavernosal plaques (Peyronie's disease)
- Abnormal bulbocavernosus reflex (neurogenic ED)

Workup

In individuals with gradual onset ED and risk factors for vascular or neurogenic causes, intracavernosal (IC) injection may differentiate. Five micrograms (suspected neurogenic) or 10 μg (suspected vasculogenic) of prostaglandin E_1 (PGE_1, e.g., alprostadil) is injected over 30 to 60 seconds into the corpus cavernosum. Erection should occur within 15 minutes and last 20 to 40 minutes. Poor or inadequate response suggests primary vasculogenic ED, whereas a satisfactory erection suggests primary neurogenic ED.

- Serum testosterone, obtained between 8 and 11 AM, is recommended in men with suspected hypogonadism.
- A fasting glucose or HbA_{1c} and lipid panel should be considered.
- Other tests to consider include TSH, CBC, serum creatinine.

Comments and Treatment Considerations

General measures to address causes/exacerbating factors of ED include weight loss if overweight, tobacco and ethanol cessation, resolution of partner conflict, and elimination (if possible) of offending drugs. For psychogenic ED, a trial of reassurance or giving permission to show intimacy in ways other than sexual intercourse (to focus on intimacy and decrease performance anxiety) is reasonable; poor response to office counseling warrants referral to a sex therapist.

Testosterone is indicated for decreased libido in men with low testosterone levels. Dihydrotestosterone (DHT) gel is dosed at 125 to 250 mg/day; the goal is to restore physiologic testosterone levels and improve symptoms (decreased libido and energy). Testosterone may worsen obstructive sleep apnea symptoms and should be avoided in men with bladder outlet obstruction. It is advisable to perform digital rectal prostate examination, prostate-specific antigen (PSA), LFTs, and lipids before initiating testosterone and again in 3 to 6 months; PSA and prostate examination should be repeated 9 to 12 months after initiating therapy, then annually if normal.

Phosphodiesterase type 5 (PDE5) inhibitors are first-line treatment for ED (Table 37-1). Side effects include headache, flushing, and dyspepsia. These drugs should not be used more than daily or with nitrates, alpha-blockers, or Class IA or III antiarrhythmics. Concurrent use with erythromycin, ketoconazole, or protease inhibitors can increase serum levels of PDE5 inhibitors.

Alprostadil (transurethral or intracavernous [IC]) is a second-line ED agent for men intolerant to PDE5 inhibitors or in whom these agents are contraindicated. Intracavernosal alprostadil is more effective than transurethral in producing erections. The starting dose for

Table 37-1. PDE5 Inhibitors in Men with Erectile Dysfunction

MEDICATION	DOSAGE STRENGTH (mg)	STARTING DOSE	MAXIMUM DOSE	ONSET (minutes)	DURATION (hr)	SUCCESSFUL INTERCOURSE RATE	
						DRUG	PLACEBO
Sildenafil	25, 50, 100	50 mg 1 hour before sex	100 mg	30-40	4	57%	14%-17%
Vardenafil	2.5, 5, 10, 20	10 mg 1 hour before sex	20 mg	30-40	4	50%-65%	32%
Tadalafil	5, 10, 20	10 mg 30 min before sex	20 mg	16-40	Up to 36	53%-70%	32%

IC alprostadil is 5 μg (neurogenic ED) or 10 μg (vasculogenic ED). Side effects include pain; 2% to 3% of men experience prolonged (>4 hours) erections with IC alprostadil.

Individuals failing the foregoing are candidates for urologic referral for possible vacuum constrictive device (VCD), microvascular bypass surgery, or implantation of a malleable/inflatable prosthesis. Other indications for urology referral are cavernosal plaques/fibrosis (Peyronie's disease) or prolonged erection (emergent referral).

References

American College of Obstetricians and Gynecologists: *Sexual dysfunction technical bulletin no. 211*, Washington, DC, 1995, ACOG.

Bodie J, Lewis J, Schow D: Laboratory evaluations of erectile dysfunction: an evidence based approach, *J Urol* 169:2262–2264, 2003.

Campbell HE: Clinical monograph for drug formulary review: erectile dysfunction agents, *J Manag Care Pharm* 11:151–171, 2005.

Godschalk MF, et al: Management of erectile dysfunction by the geriatrician, *J Am Geriatr Soc* 45:1240–1246, 1997.

Gupta M, et al: The clinical pharmacokinetics of phosphodiesterase-5 inhibitors for erectile dysfunction, *J Clin Pharmacol* 45:987–1003, 2005.

Jamieson DJ, Steege JF: The prevalence of dyspareunia, pelvic pain and irritable bowel syndrome in primary care practices, *Obstet Gynecol* 87:55, 1996.

Labbate L, Croft H, Oleshansky M: Antidepressant-related erectile dysfunction: management via avoidance, switching antidepressants, antidotes, and adaptation, *J Clin Psychiatry* 64(Suppl 10):11–19, 2003.

Latthe P, Mignini L, Gray R, et al: Factors predisposing women to chronic pelvic pain: systematic review, *BMJ* 332:749, 2006.

Lue TF, et al: Summary of the recommendations on sexual dysfunctions in men, *J Sex Med* 1:6–23, 2004.

Maas R, et al: The pathophysiology of erectile dysfunction related to endothelial dysfunction and mediators of vascular function, *Vasc Med* 7:213–225, 2002.

Morales A, et al: Endocrine aspects of sexual dysfunction in men, *J Sex Med* 1:69–81, 2004.

Tejada IS de, et al: Pathophysiology of erectile dysfunction, *J Sex Med* 2:26–39, 2005.